

ABSTRACT OF THE DISCLOSURE

An optical pick-up capable of reproducing information excellently on both CD and DVD, which are significantly different in terms of three kinds of factors, a base material thickness, a wavelength of a light source, and NA, and detecting TE signals by three kinds of methods, that is, the phase difference method, the PP method, and the 3-beam method, which are necessary to record and reproduce information. The optical pick-up is formed by integrating laser light sources having two kinds of wavelengths ($\lambda 1$, $\lambda 2$) for detecting TE signals; photodetectors, and hologram for generating the diffracted light for detecting signals. The distance d1 between the center of the photo detecting portion PD0 and the light emitting spot of the first semiconductor laser light source and a distance d2 between the center of the photo detecting portion PD0 and the light emitting spot of the second semiconductor laser light source substantially satisfy the following relationship:

$$\lambda 1 / \lambda 2 = d1 / d2.$$

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